



MEMO

TO: VIBE CORNER TEEN REPORTER TEAM

FROM: MRS. GRANT, VIBE TEEN EDITOR AND CHIEF

DATE: OCTOBER 15, 2003

RE: WHAT IS A SEVENTH GRADER'S FAVORITE  
AFTER-SCHOOL ACTIVITY?

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During our recent months' issues, many of our teenage readers have been writing in requesting us to run a feature article on "What is a seventh grader's favorite after-school activity?" Your Teen Reporter Team has been selected to poll and conduct a statistical study of what extra curricular activities the teenagers of Rockland County like to do. We are looking to run this article in our upcoming December '2003 issue.

I have attached a performance rubric to guide your work, please refer to it constantly while you work. I

am most assured that performing in the Practitioner column will guarantee an excellent article that will give Rockland County some insight about our teenagers. I will need to review your work in the next few days and will be available for any questions you might have.

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

INSTRUCTOR: MRS. GRANT

PROBLEM BASED LEARNING  
VIBE TEEN CORNER MAGAZINE  
WHAT IS A SEVENTH GRADER'S FAVORITE  
AFTER-SCHOOL ACTIVITY?

QUESTIONS TO CONSIDER:

#1. What after-school activity choices would you include in your poll?

Activity #1: \_\_\_\_\_ Activity  
#4: \_\_\_\_\_

Activity #2: \_\_\_\_\_ Activity  
#5: \_\_\_\_\_

Activity #3: \_\_\_\_\_ Activity #6:  
\_\_\_\_\_

#2. What method will your reporting team use to collect the data for your poll?

Explain. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#3. What representative sample will your team use for the poll? Why?

Explain. \_\_\_\_\_

#4. Will the representative sample that your team use be large enough to give accurate results of what Rockland County seventh graders feel is the best after-school activity?

Explain. \_\_\_\_\_

NAME: \_\_\_\_\_ INSTRUCTOR: MRS. GRANT  
 DATE: \_\_\_\_\_ PERIOD: \_\_\_\_\_

PROBLEM BASED LEARNING – VIBE TEEN CORNER POLL  
 GRADING PERFORMANCE RUBRIC

The PBL will be graded using several categories. Each category will be given a grade of 1, 2, 3, and 4 and will be multiplied by the following weights:

	<u>Weights</u>		<u>Weights</u>
Survey.....	4	Line Plot.....	3
Mathematical Understanding.....	9	Stem and Leaf Plot.....	4
Data Graph.....	9	Box & Whisker Plot.....	4

Magazine Article - See Separate Rubric

CATEGORIES	NOVICE	APPRENTICE	PRACTITIONER	EXPERT
SURVEY	has <b>at least four</b> activities, questions are <b>somewhat</b>	has <b>at least six</b> activities, questions are <b>mostly</b> fair	has at <b>least ten</b> activities, questions are <b>all</b> fair and	*all of the practitioner + generated using a

	fair and <b><u>somewhat</u></b> targeted to the representative sample	and <b><u>mostly</u></b> targeted to the representative sample	<b><u>all</u></b> targeted to the representative sample	computer generated software program
MATHEMATICAL UNDERSTANDING MEASURES OF CENTRAL TENDENCY	<b><u>some</u></b> mathematical calculations are correct	<b><u>most</u></b> mathematical calculations are correct	<b><u>all</u></b> mathematical calculations are correct	*all of the practitioner + identify which measure of central tendency describes the data best
DATA GRAPH	the appropriate graph is selected and is <b><u>somewhat</u></b> correct	the appropriate graph is selected and <b><u>mostly</u></b> correct	the appropriate graph is selected and <b><u>all</u></b> correct	*all of the practitioner + uses Microsoft Excel to create the same graph

STATISTICAL PLOTS

Line Plot	the plot is <b><u>somewhat</u></b> correct	the plot is <b><u>mostly</u></b> correct	the plot is <b><u>all</u></b> correct	*all of the practitioner + uses Microsoft Word Draw to create the plot
Stem and Leaf Plot	the plot is <b><u>somewhat</u></b> correct	the plot is <b><u>mostly</u></b> correct	the plot is <b><u>all</u></b> correct	*all of the practitioner + uses Microsoft Word Draw to create the plot
Box And Whisker Plot	the plot is <b><u>somewhat</u></b> correct	the plot is <b><u>mostly</u></b> correct	the plot is <b><u>all</u></b> correct	*all of the practitioner + uses Microsoft Word Draw to create the plot

GROUP PRODUCTIVITY = 1 POINT      PROJECT COMPLETED ON TIME

TOTAL GRADE.....  
ARTICLE GRADE.....  
PROJECT GRADE.....

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All final products are to include the following components:

- Description of your team's polling method.
- Survey
- Survey Results
- Graphical Representation of your data.
- Measures of Central Tendency Calculations for your results.
- Line Plot of your results.
- Stem and Leaf Plot of your results.
- Box and Whisker Plot of your results.
- Magazine article pulling all the above components together.

\*\*PROJECT DUE DATE- Thurs., Nov. 6, 2003

NAME: \_\_\_\_\_

PERIOD: \_\_\_\_\_

DATE: \_\_\_\_\_

INSTRUCTOR: MRS. GRANT

### LAB INVESTIGATION

#### SAMPLING AND MAKING PREDICTIONS

*SAMPLING* and *MAKING PREDICTIONS* is a strategy used to collect data when conducting research. Both concepts are used to understand how to evaluate smaller groups and how to use the information to make predictions about larger groups.

#### TASKS:

- ✓ Assemble into teams of three.
- ✓ Assign one person as the *Drawer*, one person as the *Recorder* and one person as the *Predictor*.
- ✓ Have the *Drawer* pick four blocks from the bag provided.
- ✓ Have the *Recorder* write down your team's results in the table below.
- ✓ Discuss amongst your group how to predict, based on those blocks, the number of blocks of each color in the bag. Don't peek!!!
- ✓ Have the *Predictor* to make a prediction on how many of each color block is in the bag.
- ✓ Have the *Recorder* write down your team's prediction.

- ✓ Repeat the experiment three more times.
- ✓ After completing the experiment, look into the bag and see the contents.

ATTEMPT	BLOCKS DRAWN	PREDICTION
#1		
#2		
#3		
#4		

LAB QUESTIONS:

- #1. How close was your team's prediction with the actual contents in the bag?
- #2. If your team repeats the experiment several more times, then could your team have made a better prediction?
- #3. Could your team use this same experiment and your same results to make predictions about a bag containing the same color blocks but with 1,000 blocks inside instead?

TEEN REPORTER STAFF NAMES:

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PROJECT BASED LEARNING  
VIBE TEEN CORNER MAGAZINE POLL

PROJECT PACING GUIDE

Use the pacing guide dates below to plan your three phases of your project. The dates given indicate completion dates of each phase.

PHASE I - RESEARCH

THURSDAY, JANUARY 15<sup>TH</sup> – THURSDAY, JANUARY 22<sup>ND</sup>

SURVEY QUESTIONS  
DATA COLLECTION

PHASE II - STATISTICAL ANALYSIS  
THURSDAY, JANUARY 22<sup>ND</sup> – WEDNESDAY, JANUARY 28<sup>TH</sup>

CALCULATING THE MEASURES OF CENTRAL TENDENCY

PHASE III - DATA GRAPHING AND ANALYSIS  
CONSTRUCTING STATISTICAL GRAPHS AND PLOTS  
WEDNESDAY, JANUARY 28<sup>TH</sup> – MONDAY, FEBRUARY 2<sup>ND</sup>

PHASE III - PROJECT DEVELOPMENT  
TUESDAY, FEBRUARY 3<sup>RD</sup> – FRIDAY, FEBRUARY 6<sup>TH</sup>

ARTICLE & FINAL PROJECT COMPLETION  
\*\*PROJECT DUE DATE: FRIDAY, FEB. 6<sup>TH</sup>

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

PERIOD: \_\_\_\_\_

INSTRUCTOR: MRS. GRANT

PROBLEM BASED LEARNING TASK ACTIVITY SHEET

VIBE TEEN CORNER MAGAZINE POLL

Below is a list of all the activities that you have to complete and their respective due dates. Use your scheduler to stay on task. Place a check mark next to each activity after completing it.

- Complete the Questions To Consider Worksheet.  
Due Date: Fri., Jan. 16<sup>th</sup>      Group
- Brainstorm at least ten (10) poll questions and create survey.  
Due Date: Wed., Jan. 21<sup>st</sup>      Group
- Complete Mathematics Test #7 .      Fri., Jan. 23<sup>rd</sup>      Individual
- Collect the data for your team's poll questions and record your results.  
Due Date: Wed., Jan. 28<sup>th</sup>      Group

- Complete all calculations for the Measures of Central Tendency for the team's data results. Due Date: Thurs., Jan. 29<sup>th</sup> Individual
- Design a Line Plot and a Stem and Leaf Plot to display the team's data. Due Date: Thurs., Jan. 29<sup>th</sup> Individual
- Design a Box and Whisker Plot to display the team's data. Due Date: Thurs., Jan. 29<sup>th</sup> Individual
- Complete Microsoft Excel Lab Activity. Due Date: Thurs., Jan. 29<sup>th</sup> Group
- Complete Mathematics Test #8. Fri., Jan. 30<sup>th</sup> Individual
- Design an appropriate graph to display your team's data. Due Date: Wed., Feb. 4<sup>th</sup> Group
- Write the feature article on the team's findings of the poll. Finish Product is now due!! Due Date: Fri., Feb. 6<sup>th</sup> Group

NAME: \_\_\_\_\_ INSTRUCTOR: MRS. GRANT  
 DATE: \_\_\_\_\_ PERIOD: \_\_\_\_\_

PROBLEM BASED LEARNING – VIBE TEEN CORNER POLL  
GRADING PERFORMANCE RUBRIC- ACCELERATED

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STATISTICAL PLOTS

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\*\*PROJECT DUE DATE- Friday, Feb. 6, 2004



MEMO

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FROM: MRS. GRANT, VIBE TEEN EDITOR AND CHIEF

DATE: JANUARY 15, 2004

RE: VIBE TEEN CORNER MAGAZINE POLL

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NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

INSTRUCTOR: MRS. GRANT

PROBLEM BASED LEARNING

VIBE TEEN CORNER MAGAZINE

What can school's do to help seventh graders get good grades?

QUESTIONS TO CONSIDER:

#1. What questions would you include in your poll?

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#2. What method will your reporting team use to collect the data for your poll?

Explain. \_\_\_\_\_

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Explain. \_\_\_\_\_

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#4. Will the representative sample that your team use be large enough to give accurate results of what Rockland County seventh graders feel?

Explain. \_\_\_\_\_

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# HOW TO CALCULATE THE MEASURES OF CENTRAL TENDENCY



MEAN ~the simple average.

Step #1: Add all the numbers in the data set.

Step #2: Divide the sum by the amount of numbers in the data set.

MODE ~the number that occurs the most.

Step #1: Order the numbers from least to greatest.

Step #2: The number that occurs the most in the data represents the mode.

MEDIAN ~the number that is PHYSICALLY located in the middle.

Step #1: Order the numbers from least to greatest.

Step #2: If there is an even data set, then find the two (2) numbers located in the middle and find the average of the numbers. The result will be the median of the data set.

Step #3: If there is an odd data set, then the number in the middle is the median.

## HOW TO CONSTRUCT A HISTOGRAM



❖ Make a Frequency Distribution Table for the data by using three columns- Interval, Tally, Frequency. Make sure the width of the intervals are the same size. Interval represents the range of data values, tally represents tally marks and frequency represents the number of times data appears.

❖ Use the information from the table to construct a Histogram to visually display the data. Use the rubric below.

### ❖ HISTOGRAM RUBRIC

- \*Are you showing how often data occurs?
- \*Does your histogram have a title?
- \*Are the widths of the intervals equal and continuous?
- \*Are both axes clearly labeled?
- \*Are the bars accurately plotted?
- \*Are the bars touching?

## HOW TO CONSTRUCT A GRAPH



## PERFORMANCE RUBRIC

### LINE GRAPH

- \*Are you graphing data showing changes over time?
- \*Does your graph have a title?
- \*Are both axes clearly labeled?
- \*Are all the points accurately plotted?

### Bar Graph

- \*Are you graphing data to show comparison?
- \*Does your graph have a title?
- \*Are the intervals on both axes evenly spaced?
- \*Are both axes clearly labeled?
- \*Are all the bars accurately plotted?

# HOW TO CONSTRUCT STATISTICAL PLOTS



## PERFORMANCE RUBRIC

### LINE PLOT

- \* Is the data ordered from least to greatest?
- \* Is the number line evenly spaced intervals?
- \* Is there an "x" mark for every data item?
- \* Are the "x" marks accurately plotted?

### STEM AND LEAF PLOT

- \* Is the data ordered from least to greatest?
- \* Do the stems represent the correct place values?
- \* Do the leaves represent the correct place values?
- \* Does the key indicate how to read the data items?

### BOX AND WHISKER PLOT

- \* Is the data ordered from least to greatest?
- \* Is the number line evenly spaced intervals?
- \* Is the median for the entire set of data correctly located in the middle of the box in the plot as the second quartile?
  
- \* Is the median for the first half of data correctly displayed?
- \* Is the median for the second half of data correctly displayed?
- \* Are the medians listed as the first and third quartiles?
- \* Is the least value and the greatest value of the data known as the whiskers?

